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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 940,770	08 29 2001	Murali Rajagopalan	174-983	8037

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EXAMINER

BUTTNER, DAVID J

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 04/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/940,770

Applicant(s)

RAJAGOPALAN ET AL.

Examiner

David Buttner

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

"homogenous" is not clearly defined. Applicant gives no clear line of demarcation between "homogenous" and "nonhomogenous". In view of the fact that the only potential difference between the claims and the cited art is whether the cited art can be considered "homogenous", a clear definition of "homogenous" is necessary.

Claims 1, 2, 5-7 and 10-14 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Sullivan '553 Patent.

Sullivan exemplifies (Table 6) three layer golf balls. Core type B is made from polybutadiene, polypropylene, zinc diacrylate, peroxide etc. The polypropylene qualifies as applicant's thermoplastic. The cores are to be made by mixing all ingredients (except initiator) for a time then adding initiator and raising the temperature (col. 8, lines 22-32). The composition is uniform (col. 8, line 18).

Claims 1, 2, 5-7, 10 and 12-14 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Nesbitt '105 Patent.

Nesbitt produces cores for golf balls. The cores have powdered plastics such as polyester, nylon or polypropylene included in the rubber composition (Table 3). "At least one layer of covering" (col. 8, line 16) suggests two cover layers. The cores are to be

made by mixing all ingredients (except initiator) for a time, then adding initiator and raising the temperature (col. 7, lines 38-47). The composition is uniform (col. 7, line 34).

Claims 1, 2, 5-7, 10-15, 18-21 and 24-28 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Melvin '562 Patent.

Melvin discloses four layer golf balls of applicant's dimensions and hardness. Polypropylene (col. 6, line 53) can be included in the core. The composition is uniform (col. 9, line 51).

Claims 8, 9, 22 and 23 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over the Nesbitt '999 Patent.

Nesbitt discloses four layer golf balls. The cover can be casted polyurethane (col. 14, line 42). The core can have polypropylene added to the rubber composition (col. 19, line 13). The reference does not qualify as prior art against the other claims.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over the Sullivan '553 or Nesbitt '105 or Melvin '562 Patent.

Each of the references make the core by mixing rubber, polypropylene and other ingredients (except initiator) at 200°F for a time. The initiator is then added. The blend is then shaped and cured at a higher temperature which activates the initiator. This lacks the cooling step between the initial mixing and addition of initiator.

Such a step would have been obvious. If the initial blend was to be stored prior to curing, there would be no need to keep the initial blend at 200°F. Allowing the initial

blend to cool would save on energy costs. When resumption of the process is desired, the initiator would then be added and shaping/curing performed.

Applicant's arguments filed 3/17/03 have been fully considered but they are not persuasive.

Applicant argues the thermoplastic polypropylene would not homogenously mix with the rubber because the melting point of polypropylene is much higher than the mixing temperature used by the references. Applicant argues the polypropylene would appear as particles in the rubber matrix.

This is not convincing. The specification never defines "homogenous". The references each state their blends are uniformly mixed. The examiner does not recognize a clear distinction between "homogenous" and "uniform".

Applicant is likely correct when stating the polypropylene forms a dispersed phase in the rubber matrix. However, applicant's blend will also exhibit such a two phase morphology. Melt blends (except in rare instances of miscibility) exhibit two phase morphologies. The Encyclopedia of Polymer Science is cited for its discussion of blend morphology.

Finally, arguments regarding the high melting point of polypropylene do not square with applicant's own examples. Applicant uses Hytrel 3078 as his thermoplastic. Hytrel has a melt point of 170°C (see Product Guide). This is much higher than the 95°C mixing temperature employed by applicant's examples.

The terminal disclaimer removes the obviousness double patenting.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Buttner whose telephone number is 703-308-2403. The examiner can normally be reached on Weekdays from 10:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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DAVID J. BUTTNER
PRIMARY EXAMINER

D. Buttner/mn
April 29, 2003

David Buttner